

Subject Index

A

- Abdominal fat
 - C-peptide level as predictor of, 1010
 - insulin resistance and, 633, 1010, 1547, 1684
 - leptin and, 1635
 - racial differences in, 1547
- Acyl-CoA, signaling by, 273
- Adenosine triphosphate-sensitive K⁺ channel
 - genetic markers for, 267
 - in islet, 267, 1431, 1755
- Adenovirus-polylysine/DNA complex, in gene transfer to islet, 1197
- Adipocyte
 - glucose storage in, EGF and, 1619
 - leptin production in, insulin and cortisol effects on, 1435
- Adipose tissue, leptin production and, 984
- Adiposity, central. *See* Abdominal fat
- β_2 -adrenergic receptor
 - food intake and, 909
 - genetic mutation of
 - body weight and, 1115, 1358
 - insulin sensitivity and, 1115
 - leptin expression and, 909
- Advanced glycosylation end product
 - in aortic peptide-insoluble and -soluble collagen, 1037
 - basement membrane modifications by, 348
- Advanced glycosylation end product
 - inhibitor, tendon collagen and, 1694
- African-Americans
 - abdominal obesity in, 1547, 1635
 - insulin resistance and secretion in, 742, 1547
 - NIDDM remission in, 337
- AGE. *See* Advanced glycosylation end product
- Age
 - insulin action and, 947
 - neuropathy and, 209
 - QT interval and, insulin level and glucose tolerance and, 376
- Alanine metabolism, in NIDDM, 863
- Albumin, phlorizin or vanadate restoration of, 1217
- Albuminuria, 731
- Amino acids, protein metabolism and, 393, 1245
- Aminoguanidine
 - autonomic neuropathy and, 284
 - tendon collagen and, 1694
- Amlodipine, for hypertensive NIDDM, 216
- Amylin, genetic mutation of, 1279
- Amyloid polypeptide, islet, genetic polymorphism of, 291
- Amyloidosis, in islet, growth hormone and dexamethasone and, 1094
- Anaplerotic/malonyl-CoA pathway, in islet nutrient signaling, 190
- Angiopathy
 - PDGF- β in, 507
- Angiotensinogen, genetic mutation in, in nephropathy, 367, 1204
- Antibody CDP571, TNF- α neutralization by, 881
- Antigen processing, transporter associated with, 779

- Antioxidant
 - congenital malformation and, 1497
 - retinal metabolism and, 1233
- Aorta
 - peptide-insoluble and -soluble collagen in, Maillard reaction AGE and, 1037
- ApoB-100, genetic mutation of, insulin resistance syndrome and dense LDL phenotype in, 1405
- Area postrema, GLP-I receptor in, 832
- Asian Indian, obesity gene in, 675
- Atherosclerosis, glycemic control and, 1253
- Autoantibodies, to phogrin and ICA512/IA-2, 1344
- Autoantigen, topoisomerase II as, 408
- Autoimmune diabetes
 - CD45RB^{low} CD4⁺ cells in, 71
 - diazoxide for, 1427
 - disease course of, 1063
 - heat shock protein 60 peptide p277 for, 271, 1168
 - Kilham rat virus induction of, 557
- Autoimmunity
 - concordance between twins for, 1284
 - to GM2-1 islet ganglioside, 1193
 - perinatal, in offspring of diabetic parent, 967
- Autonomic activation, of glucagon secretion, in hypoglycemia, 960
- Autonomic neuropathy
 - aminoguanidine and, 284
 - incidence and predictors of, 308

B

- BABY-DIAB Study, 967
- Basement membrane, AGE-modified, 348
- BB rat, anti-endothelial cell autoantibodies in, 1209
- Beraprost sodium, for retinal and nerve dysfunction, 361
- Betacellulin, in PDX-1 induction of insulin secretion and glucokinase, 1826
- β -HC-9 cell, progenitor islets and, 1766
- Bioartificial pancreas
 - functional kinetics of, 1102
 - vascularized, 342
- Blood flow, in skeletal muscle, insulin and, 1471
- Body fat, total, leptin and, 1635
- Botnia study, 1585
- BRIN-BD11, characterization and production of, 1132
- Butylated hydroxytoluene, congenital malformation and, 1497

C

- Calcium, in β -cell, cAMP synergy with glucose and, 295
- Calcium channel, in islet
 - of NOD mouse, 1678
 - voltage dependent, phosphorylation of, 1412
- Calcium signaling
 - endothelin-induced, in coronary artery smooth muscle, 876
 - glucose-derived superoxide anions and, 1386
- Cardiomyocyte, troglitazone and, 1822

- Catecholamines
 - in glucoregulation, during intense exercise, 148
 - leptin gene expression and, 1744
- Caucasians
 - insulin sensitivity and abdominal obesity in, 1547
 - of northern European descent, genetic markers in, 370
 - sulfonylurea receptor in, genetic variants in, 825
- CD4⁺ T-cell clone, in transfer of diabetes in NOD mouse, 328
- CD8⁺ cytotoxic T-cell
 - β -cell specific, 1121
 - in NOD mouse, 902, 1121
- CD44 variant transcripts, in insulinitis, 718
- CD45RB^{low} CD4⁺ cell, in NOD mouse, 71
- CDP571 antibody, TNF- α neutralization by, 881
- Cell adhesion molecules, in IDDM
 - pathogenesis and therapy, 705
- Cellular energy circuit, 113
- Central nervous system, insulin transport in, dexamethasone and, 86
- Cholesterol, absorption of, fasting blood glucose and, 755
- Chromosome 11 markers, in NIDDM, 370
- Chromosome 12, in MODY, insulin secretion and, 1503
- Cilazapril, for hypertensive NIDDM, 216
- Circadian rhythm, of insulin sensitivity, 1044
- Cognitive dysfunction, in hypoglycemia, 1030
- Collagen
 - aortic, AGE of, 1037
 - embedded in islet, ductal cyst formation and, 1108
 - in tendon, AGE inhibitor and aminoguanidine effects on, 1694
- Complications of diabetes. *See also* Diabetes Control and Complications Trial (DCCT); *specific disorders*
 - isokinetic muscle strength and, 440
- Congenital malformation, antioxidants and, 1497
- Contractile protein, mesangial phenotypic modulations and, 488
- Coronary artery disease
 - Insulin Resistance Atherosclerosis Study and, 742
 - risk of, insulin and proinsulin as markers of, 736
- Coronary artery smooth muscle, endothelin-induced Ca²⁺ signaling in, insulin and, 876
- Cortisol, adipocyte leptin production and, 1435
- Cow's milk
 - β -lactoglobulin in, immune response to, 178
 - protein in, IDDM and, 1706
- C-peptide level, as predictor of visceral adiposity, 1010
- CTL. *See* Cytotoxic T lymphocyte
- Cyclic adenosine monophosphate, glucose/tolbutamide synergy with, β -cell Ca²⁺ and, 295

Cyclic guanosine monophosphate, insulin-induced, in platelets, nitric oxide and, 768
Cyclosporin, for juvenile IDDM, 101
Cytokines
 in insulinitis lesion, 749
 pancreatic endocrine cell TAP-1 expression and, 779
Cytotoxic T lymphocyte
 β -cell specific, islet destruction by, 1121
 in NOD mouse, 902

D

db/db mouse, islet dysfunction in, fatty acids and, 580
DCCT. *See* Diabetes Control and Complications Trial (DCCT)
Deafness, maternally inherited diabetes and, 478
Denmark, β_2 -adrenergic receptor genetic mutations in, insulin sensitivity and body weight and, 1115
Desensitization, glucose-induced, reversal of, in islet, 502
Dexamethasone
 insulin transport and, 86
 islet amyloidosis and, 1094
 neuropeptide Y expression induced by, in islet, 1306
Diabetes Control and Complications Trial (DCCT). *See also* Complications of diabetes; *specific complication*
 comments on, 270
 glycemia in, 1289
Diadenosine polyphosphate, as islet messenger, 1431
Diazoxide, for autoimmune diabetes, 1427
Diet. *See also* Food intake
 fructose in, with and without pioglitazone, VLDL kinetics and, 806
 high fat
 glucose transport and, englitazone and, 60
 metabolic impairment and, insulin resistance after, 651
 protein in, urea synthesis and, 667
Ductal cyst formation, in collagen-embedded islet, 1108

E

EDRF. *See* Endothelium-derived relaxing factor
EGF. *See* Epidermal growth factor
Elderly individuals
 β_2 -adrenergic receptor genetic mutation in, body weight and, 1358
 pituitary-gonadal axis in, health and, 1605
Electric activity, of islets of Langerhans, 595
Embryopathy, preimplantation, IDDM-induced, 1463
Endocrine cell, pancreatic, TAP-1 expression in, cytokines and, 779
Endothelial cell
 antioxidant enzymes in, hyperglycemia and, 471
 autoantibodies to, 1209
Endothelin
 Ca^{2+} signaling induced by, in coronary artery smooth muscle, 876
 release of, hypertriglyceridemia and hyperinsulinemia and, 316
 sciatic nerve ischemia and, 627
 vasoconstriction response to, 105
Endothelium-derived relaxing factor, signaling by, glucose-derived superoxide anions and, 1386

Energy metabolism. *See* Glucose metabolism
Englitazone, glucose transport and, in high-fat diet, 60
Enterostatin, pancreatic hormone secretion and, 1157
Epidermal growth factor, glucose storage and, 1619
Epinephrine, insulin secretion and, 1373
Exercise
 capacity for, in NIDDM, 79
 intense, glucoregulation in, 148
Extracellular matrix, fetal islet growth and, 1223
Eye. *See also* Retinopathy
 lens of, glucosidation of, 587

F

FAD-glycerophosphate dehydrogenase, G-protein linkage to, MODY and, 639, 1285
Familial diabetes. *See also* Offspring of diabetic parent
 ICARUS data set in, 1720
 prediction of, 926
Fasting
 blood glucose after, cholesterol absorption and, 755
 leptin and, 1511
 proglucagon expression and, 434
Fat, dietary
 glucose transport and, englitazone and, 60
 metabolic impairment and, insulin resistance after, 651
Fat cell. *See* Adipocyte
Fatty acid(s)
 free. *See* Free fatty acid(s)
 islet dysfunction and, 580
 metabolism of, troglitazone and pioglitazone and, 1556
 monounsaturated, weight loss and, 569
 fatty mutation, in leptin receptor, 1141
Fetal islet
 glucokinase in, 1068
 growth of, 1223
Finns, *rad* gene polymorphism in, 429
Food intake. *See also* Diet
 β_2 -adrenergic receptor and, 909
 after fasting, leptin and, 1511
 metabolic impairment in, insulin resistance after, 651
 proglucagon expression and, 434
 protein metabolism after, amino acids and insulin in, 1245
Free fatty acid(s)
 metabolism of, after pancreatic transplantation, 354
 plasma level of, insulin-stimulated glucose flux and, 446
Fructose, dietary, with and without pioglitazone, VLDL kinetics and, 806

G

G-protein, FAD-glycerophosphate dehydrogenase linkage to, in MODY, 639, 1285
GAD gene
 ontogeny and tissue distribution of, 496
 in prediction of familial diabetes, 926
Galactosemia, retinal metabolism in, antioxidants and, 1233
Galactosemic nephropathy, in transgenic mice, 56
Ganglioside GM2-1, autoimmunity to, 1193
GAP43, in regenerating sciatic nerve, 199
Gastric inhibitory polypeptide receptor, genetic mutation of, 1701

Gene transfer, to islet, 1197
Genetic factors, quantitative traits as, 1
Genetic markers
 of ATP-sensitive K^+ channel, 267
 of IDDM, 544
 of mitochondrial GPDH, 262
 of NIDDM, 370, 563
 of obesity, in Pima Indians, 1229
Genetic polymorphism
 of angiotensinogen, in nephropathy, 367, 1204
 of hepatic glycogen synthase, 291
 of islet amyloid polypeptide, 291
 of *rad*, in Finns, 429
 simple sequence, identification of, 291
GH. *See* Growth hormone
GK rat
 exocytosis of insulin in, 934
 glycogen synthesis in, soleus muscle protein kinase C and, 1396
 islet enzyme normalization in, 886
Glomerular hypercellularity, in diabetes, 44
Glomerular hyperfiltration, as predictor of nephropathy, 1729
GLP-I. *See* Glucagon-like peptide I
Glucagon
 in glucose regulation, 1076
 secretion of
 autonomic, in hypoglycemia, 960
 enterostatin and, 1157
Glucagon receptor
 genetic mutation of, 725
 in islet, 257
Glucagon-like peptide I
 extrapancreatic effects of, 552
 overnight infusion of, in NIDDM, 1524
Glucagon-like peptide I receptor
 in islet, 257
 in subfornical organ and area postrema, 832
Glucokinase
 in fetal islet, 1068
 genetic promoter of, 1478
 genetic variation of, β -cell function and, 422
 hepatic glucose production and, 1329
 metabolic regulation and, 223
 PDX-1 induction of, betacellulin and, 1826
Glucokinase regulatory protein, expression and characterization of, 1670
Glucose
 in blood, fasting, 755
 cAMP synergy with, β -cell Ca^{2+} and, 295
 chronically elevated, islet functioning and, 1774
 desensitization induced by, reversal of, in islet, 502
 fasting, cholesterol absorption and, 755
 ingestion of
 GLUT4 translocation and, 1051
 vs. infused, pulsatile insulin secretion and, 1317
 phosphorylation of, insulin resistance and, 915
 storage of, EGF and, 1619
 superoxide anion generation induced by, Ca^{2+} /EDRF signaling and, 1386
 uptake of, α -lipoic acid/thioctic acid and, 1798
Glucose intolerance, in Nauruans, 1367
Glucose metabolism
 extrapancreatic, GLP-I and, 552
 IGF-I and insulin in, hexosamine availability and, 1734
 α -lipoic acid and, 1024
 nicotinamide and, 1631

- Glucose production
in insulin-induced hypoglycemia, 1805
in liver, 454, 1805
glucokinase and, 1329
peripheral vs. portal insulin and, 1594
plasma free fatty acid level and, 446
Glucose tolerance, QT interval and, 376
Glucose transport
englitazone and, in high-fat diet, 60
insulin action and, 1644
insulin resistance and, 915
Glucose-6-phosphatase
genetic structure of, 1563
in kidney and liver, 891
Glutamine metabolism, in NIDDM, 863
Glutamine:fructose-6-phosphate
amidotransferase, in skeletal muscle, 302
GLUT4
in skeletal muscle
insulin action and, 23, 28
transgenic mice expressing, 23
translocation of
glucose ingestion and, 1051
GLUT4 and Na⁺-K⁺-ATPase in, 1516
Glycemic control
atherosclerosis and, 1253
complications and, 1289
glucagon in, 1076
recombinant human IGF-I and, 91
Glycerol phosphate dehydrogenase
in islet
normalization of, 886
of Zucker rat, 1626
mitochondrial, 262
mitochondrial/cytosolic, insulin secretion and, 1238
Glycogen synthase
acquired defects of, 400
hepatic, genetic polymorphism of, 291
hexosamine regulation of, 322
Glycogen synthesis, soleus muscle protein kinase C and, 1396
Glycoprotein PC-1, in skeletal muscle, obesity and insulin resistance and, 1324
GM2-1 islet ganglioside, autoimmunity to, 1193
GPDH. *See* Glycerol phosphate dehydrogenase
Graft rejection
IFN- γ production during, 1350
intrahepatic preimmunization and, 144
Growth hormone
insulin resistance induced by, lipid availability and, 415
islet amyloidosis and, 1094
Growth-associated protein 43, in regenerating sciatic nerve, 199
- H**
HDL. *See* High-density lipoprotein
Heart muscle. *See* Cardiomyocyte
Heat-shock protein, immune response to, in insulinitis, 165, 271
Heat-shock protein 60 peptide p277, for autoimmune diabetes and insulinitis, 271, 1168
Hematocrit, NIDDM risk and, 576
Hemodynamic abnormality, insulin deficiency and, 602
Hepatocyte, fatty acid metabolism in, troglitazone and pioglitazone and, 1556
Hepatocyte growth factor, fetal islet growth and, 1223
Hepatocyte nuclear factor 1, phlorizin or vanadate restoration of, 1217
- Hexosamine
availability of, IGF-I and insulin action and, in glucose metabolism, 1734
glycogen synthase regulation by, 322
insulin resistance and, 1003
protein phosphatase-1 regulation by, 322
Hippocampal synaptic plasticity, learning and, 1259
Hispanics
abdominal obesity in, 1547
insulin resistance and secretion in, 742, 1547
HIT-T15 cell, activation of, IPF-1/PDX-1 in, 1478
HLA-DPB1*0301, IDDM and, in Mexican-Americans, 610
HNF-1. *See* Hepatocyte nuclear factor 1
Hyaluronan, mesangial cell proliferation and, 44
Hydroxytoluene, butylated, congenital malformation and, 1497
Hyperglucagonemia, phenylalanine oxidation and, 463
Hyperglycemia
IL-6 and TNF- α production in, 954
nerve conduction and, age and, 209
oxidative stress and, 471
Hyperinsulinemia
endothelin-1 release and, 316
plasma leptin concentration and, 1364
Hypertension
in NIDDM, cilazapril and amlodipine in, 216
puberty and, 51
Hypertriglyceridemia
endothelin-1 release and, 316
Hypoglycemia
cognitive dysfunction in, 1030
insulin-induced
glucagon secretion in, autonomic mediation of, 960
glucose production in, 1805
Hypothalamus, leptin receptor mutations in, 992
Hypoxia, islet ICAM-1 and, 1336
- I**
ICA. *See* Islet cell antigen(s)
ICAM-1. *See* Intercellular adhesion molecule-1
ICARUS data set, IDDM progression in, 1720
IDDM
disease course of, 1063
juvenile, cyclosporin therapy in, 101
preimplantation embryopathy and, 1463
progression to, in ICA⁺ relatives, 1720
puberty in, glomerular hypertrophy and hypertension and, 51
susceptibility genes for, 544
IFN. *See* Interferon
IGF. *See* Insulin-like growth factor
IL. *See* Interleukin
Imidazoline, insulin secretion and, 1610
Immune response. *See also* Autoimmune diabetes; Autoimmunity
to cow's milk β -lactoglobulin, 178
of GAP-43, in regenerating sciatic nerve, 199
to heat-shock protein, in insulinitis, 165, 271
to islet cell antigens, 795
perinatal, in offspring of diabetic parent, 967
Immunosuppression, intrahepatic, islet survival and, 144
Insulin
actions of
age and, 947
hexosamine availability and, 1734
adipocyte leptin production and, 1435
assay of, standardization of, 242
cGMP induced by, nitric oxide and, in platelets, 768
exocytosis of, in GK rat, 934
glucose intolerance and, in Nauruans, 1367
glucose production stimulated by
in liver, 454
plasma free fatty acid level and, 446
glucose transport and, 1644
glycation of, in islets of Langerhans, 1489
leptin and, 695, 699
level of
hemodynamic abnormality and, 602
prostaglandin inhibition and, 602
QT interval and, 376
in prediction of familial diabetes, 926
processing of, into T-cell epitope, by MHC class II, 1711
protein metabolism and, after food intake, 1245
as risk marker for coronary artery disease, 736
skeletal muscle blood flow and, 1471
skeletal muscle GLUT4 and, 23, 28
vasodilation and sympathetic stimulation and, 15
Insulin promoter factor 1 gene, characterization and chromosomal mapping of, 789
Insulin promoter factor 1/PDX-1, in HIT-T15 cell activation, 1478
Insulin receptor
in islet, 711
protein tyrosine phosphatase 1B interaction with, 1379
Insulin receptor substrate 1, in islets, 711
Insulin resistance
abdominal fat and, 633, 1010, 1547, 1684
 β_2 -adrenergic receptor genetic mutations and, 1115
after metabolic impairment, 651
after oophorectomy and testosterone treatment, 615
after pancreatic transplantation, 134
ApoB-100 genetic mutation in, 1405
circadian rhythm of, 1044
GH and, lipid availability and, 415
glucose transport and, phosphorylation and, 915
hexosamines and, 1003
insulin pulsatility and, 683
leptin plasma level and, 988
 α -lipoic acid and, 1024
muscle glycoprotein PC-1 and, 1324
oral vanadyl sulfate and, 659, 1285
PC-1 and, 980
racial differences in, 742, 1547
recombinant human IGF-I and, 91
thiazolidinediones for, 1661
troglitazone and, 1572
Insulin Resistance and Atherosclerosis Study, 742, 1547
Insulin secretion
enterostatin and, 1157
epinephrine and, 1373
glucokinase glucose sensor and, 223
glucose regulation of, 190
IL-1 β and, 1783
imidazoline stimulation of, 1610
mitochondrial/cytosolic GPDH and, 1238
in MODY, 1503
PDX-1 induction of, betacellulin and, 1826

- as predictor of visceral adiposity, 1010
pulsatility of
 glucose ingestion vs. infusion and, 1317
 insulin resistance and, 683
racial differences in, 742
sulfonylurea stimulation of, mechanisms of, 1792
wortmannin and, 854
Insulin sensitivity. *See* Insulin resistance
Insulin therapy
 dose-response to, after pancreatic transplantation, 1267
 infused
 IGF-I and, 170
 kinetics of, 1102
 lispro insulin after, 1750
 peripheral vs. portal, hepatic glucose production and, 1594
 portal, urea synthesis and, 667
 preventive, in islet cell antibody-positive patients, 622
 prophylactic, IDDM delay and, 205
Insulin transport, dexamethasone and, 86
Insulin-dependent diabetes. *See* IDDM
Insulinitis
 CD44 variant transcripts in, 718
 immune response to heat-shock protein in, 165, 271
 lesions in, cytokine gene expression in, 749
Insulin-like growth factor I
 glucose disposal by, hexosamine availability and, 1734
 insulin infusion and, 170
 PI 3-kinase stimulation by, in muscle, 869
 recombinant human, insulin sensitivity and, 91
Insulinotropic peptide receptor, in islet, 257
Integrin $\alpha 4$, homing of, to NOD mouse pancreas, 1173, 1181
Intercellular adhesion molecule-1, in islet, IFN- α and hypoxia and, 1336
Interferon- α
 islet ICAM-1 and, 1336
 in non- β cells, 818
Interferon- γ
 diabetes in absence of, 812
 islet dysfunction and, 183
 T-cell production of, in NOD islet grafts, 1350
Interleukin-1 β
 islet sensitivity to, nitric oxide synthesis and, 771
 purine nucleotides and insulin secretion and, 1783
Interleukin-6, in hyperglycemia, 954
IPF-1 gene. *See* Insulin promoter factor 1 gene
IRS-1. *See* Insulin receptor substrate 1
Ischemia, endothelin-induced, sciatic nerve susceptibility to, 627
Islet
 amyloid polypeptide in, genetic polymorphism of, 291
 amyloidosis of, growth hormone and dexamethasone and, 1094
 ATP-sensitive K^+ channel genes in, 267
 Ca^{2+} in, cAMP synergy with glucose/tolbutamide and, 295
 CD44 variant transcripts in, during insulinitis, 718
 collagen-embedded, ductal cyst formation and, 1108
 destruction of
 by β -cell-specific CTLs, 1121
 IFN- γ production during, 1350
 mechanics of, 1063
 dysfunctional
 fatty acids and, 580
 TNF- α and IFN- γ and, 183
 enzyme normalization in, in GK rat, 886
 fetal
 glucokinase in, 1068
 growth of, 1223
 functional properties of, chronically elevated glucose and, 1774
 ganglioside GM2-1 in, autoimmunity to, 1193
 gene transfer to, 1197
 glucokinase gene and, 422, 1478
 glucose-induced desensitization in, reversal of, 502
 growth and mass of, after islet transplantation, 1541
 ICAM-1 in, IFN- α and hypoxia and, 1336
 IL-1 β effects on, 1783
 insulin receptor and IRS-1 in, 711
 K^+ channels in, 845
 ATP-sensitive, 267, 1431, 1755
 of Langerhans
 electric activity of, 595
 insulin glycation in, 1489
 microcirculation of, 385
 leptin effects on, 1580
 lithium mitogenicity in, 1057
 mRNAs in, 127
 neuropeptide Y expression in, dexamethasone induction of, 1306
 nitric oxide synthesis in, IL-1 β sensitivity and, 771
 of NOD mouse, calcium channels in, 1678
 nutrient signaling by, anaplerotic/malonyl-CoA pathway in, 190
 progenitor islet characteristics in, 1766
 proliferation defect in, in Otsuka-Long-Evans-Tokushima Fatty rat, 941
 receptors in, 257
 tissue-specific self-peptides bound by MHC class I in, 1761
 trinucleotide repeat-containing genes in, 157
 troglitazone and, 1572
 VDCC phosphorylation in, 1412
 of Zucker rat, enzymes in, 1626
Islet allograft, rejection of, intrahepatic preimmunization and, 144
Islet cell antigen
 cellular immune response to, 795
 512/IA-2, autoantibodies to, 1344
 in prediction of familial diabetes, 926
 preventive insulin therapy and, 622
 in progression to IDDM, in relatives, 1720
 p69, 513
Islet transplantation
 allograft rejection in, intrahepatic preimmunization and, 144
 ATP-sensitive K^+ channels after, 1755
 islet growth and mass after, 1541
 islet vulnerability after, 1161
 metabolic control after, 1814

J
Japanese
 amylin gene mutation in, 1279
 GIP receptor mutation in, 1701
 obesity gene in, 675
 prohormone convertase 3 in, genetic organization and mutations of, 897
Japanese-Americans
 β -cell function in, glucokinase gene variation and, 422
 visceral adiposity in, insulin and C-peptide as predictors of, 1010
Juvenile IDDM, cyclosporin therapy in, 101

K
Ketogenesis, leptin and, 1511
Kidney, glucose-6-phosphatase mRNA and activity in, 891
Kilham rat virus, autoimmune diabetes induced by, 557

L
 β -lactoglobulin, in cow's milk, immune response to, 178
LDL. *See* Low-density lipoprotein
Learning, hippocampal synaptic plasticity and, 1259
Lens, ocular, glycoxidation of, 587
Leptin
 abdominal fat and, 1635
 adipocyte production of, insulin and cortisol effects on, 1435
 β_3 -adrenergic receptor suppression of, 909
 catecholamine and, 1744
 fasting and refeeding and, 1511
 hyperinsulinemia and, 1364
 injection of, obesity and, 1446
 insulin relationship to, 695, 699
 insulin sensitivity and, 988
 islet function and, 1580
 ketogenesis and, 1511
 in Mexican-Americans, 822
 neuropeptide Y and, 531
 obesity and, 988, 1446, 1455, 1580
 production of
 in adipose tissue, 984
 troglitazone and, 1276
 resistance to, obesity gene and, 1455
 total body fat and, 1635
Leptin receptor
 genetic mutation of, 1141
 hypothalamic, genetic mutations of, 992
Leptin binding protein, obesity and, 1638
Lipid, availability of, GH-induced insulin resistance and, 415
 α -Lipoic acid/thioctic acid, glucose uptake and, 1798
Lipoprotein. *See also* High-density lipoprotein; Low-density lipoprotein; Very-low-density lipoprotein
 abnormalities in, nephropathy and, 974
Liposome, polycationic, in gene transfer to islet, 1197
Lispro insulin, after previous insulin therapy, 1750
Lithium, mitogenicity of, in islet, 1057
Liver
 glucose production in
 glucokinase and, 1329
 insulin control of, 454
 during insulin-induced hypoglycemia, 1805
 glucose-6-phosphatase in, 891, 1563
 glycogen synthase in, genetic polymorphism of, 291
 insulin resistance in, after pancreatic transplantation, 134
Low-density lipoprotein
 oxidation of, susceptibility to, 762
 phenotype of, ApoB-100 genetic mutation in, 1405
Lymphocyte, mucosal, homing of, to NOD mouse pancreas, 1173, 1181

- Lymphocyte function-associated antigen-1, homing of, to NOD mouse pancreas, 1173, 1181
- LY290181, action mechanism of, 642
- M**
- Maillard reaction, AGE of, aortic peptide-insoluble and -soluble collagen and, 1037
- Major histocompatibility complex class I functioning of, in NOD mouse, 902
- in islet destruction by β -cell-specific CTLs, 1121
- tissue-specific self-peptides bound by, in islet, 1761
- Major histocompatibility complex class II, insulin processing by, into T-cell epitope, 1711
- Malonyl-CoA, signaling by, 273
- Matrigel, sieving properties of, 348
- Matrix permeability, cross-linking and, 348
- Maturity-onset diabetes of the young
- insulin secretory response in, 1503
- mitochondrial FAD-glycerophosphate dehydrogenase and G-protein linkage in, 639, 1285
- Menopause, islet function after, leptin and, 1580
- Mesangial cell, proliferation of, effect of PGE_2 and hyaluronan on, 44
- Mesangium, phenotypic modulations in, contractile proteins and, 488
- Mesenteric ganglia, autonomic neuropathy of, aminoguanidine and, 284
- Mesenteric vasculature, damage to, 139
- Metaiodobenzylguanidine, myocardial uptake of, 801
- Mexican-Americans
- HLA-DPBI*0301 in, IDDM and, 610
- leptin in, 822
- NIDDM susceptibility genes in, 563
- MHC. *See* Major histocompatibility complex
- Microalbuminuria, 731
- Middle-aged men, fasting blood glucose and cholesterol absorption in, 755
- Milk
- cow's, IDDM and, 1706
- β -lactoglobulin in, immune response to, 178
- MIN6 cell, proinsulin biosynthesis in, 37
- Mitochondria
- energy circuit of, 113
- genetic mutation of
- in maternally inherited diabetes and deafness, 478
- GPDH in, 262
- Mitochondrial complex I, Vacor intoxication and, 1531
- MODY. *See* Maturity-onset diabetes of the young
- Monounsaturated fatty acid, weight loss and, 569
- Mucosal lymphocyte, homing of, to NOD mouse pancreas, 1173, 1181
- Muscle. *See also specific muscle or muscle type*
- isokinetic strength of, diabetic complications and, 440
- Myocardial uptake, of
- metaiodobenzylguanidine, 801
- N**
- Na^+/K^+ -ATPase, in GLUT4 transgenic mice, 1516
- Nauruans, glucose intolerance in, 1367
- Nephropathy. *See also* Renal disease
- angiotensinogen gene in, 367, 1204
- galactosemic, in transgenic mice, 56
- glomerular hyperfiltration as predictor of, 1729
- lipoprotein abnormalities and, 974
- phenotypic modulations in, 488
- puberty and, 51
- Nervous system
- central, insulin transport in, dexamethasone and, 86
- sympathetic, insulin effects on, 15
- Nesidioblastosis, reproduction of, 1108
- Neuropathy. *See also specific nerve*
- age and, 209
- autonomic
- aminoguanidine and, 284
- incidence and predictors of, 308
- beraprost sodium for, 361
- sensorimotor perivascular, 139
- Neuropeptide Y
- dexamethasone-induced expression of, in islet, 1306
- leptin action on, 531
- Nicotinamide, glucose metabolism and, 1631
- NIDDM
- abdominal fat and insulin sensitivity in, 1684
- genetic analysis of, quantitative traits in, 1
- GIP receptor mutation in, 1701
- hematocrit and, 576
- overnight infusion of GLP-I in, 1524
- remission of, 337
- susceptibility genes for, 370, 563
- thiazolidinediones for, 1661
- Nitric oxide
- insulin-induced cGMP and, in platelets, 768
- in islet dysfunction, $\text{TNF-}\alpha$ and $\text{IFN-}\gamma$ and, 183
- islet synthesis of, $\text{IL-1}\beta$ sensitivity and, 771
- NOD mouse
- $\text{CD45RB}^{\text{low}}$ CD4^+ cells in, 71
- IDDM onset in, prophylactic insulin therapy and, 205
- $\text{IFN-}\gamma$ absence in, 812
- insulinitis in, immune response to
- heat-shock protein in, 6165
- islet graft destruction in, $\text{IFN-}\gamma$ production during, 1350
- islet of, calcium channels in, 1678
- MHC class I function in, 902
- pancreas of, mucosal lymphocyte homing to, 1173, 1181
- reg* gene expression in, 67
- thymus of, giant perivascular space formation in, 1535
- transfer of diabetes in, CD4 T-cell clones in, 328
- Non-insulin-dependent diabetes. *See* NIDDM
- O**
- Obesity. *See also* Abdominal fat
- β_3 -adrenergic receptor gene mutation in, 1115, 1358
- genetics of
- catecholamine and, 1744
- leptin resistance and, 1455
- in Pima Indians, 1229
- IGF-I stimulation of muscle PI 3-kinase in, 869
- leptin and, 988, 1446, 1455, 1580
- leptin binding proteins and, 1638
- morbid, obesity gene in, 687, 691
- muscle glycoprotein PC-1 and, 1324
- tissue defects in, malonyl and acyl-CoA signaling and, 273
- Obesity gene
- in Japanese and Asian Indians, 675
- in morbid obesity, 687, 691
- mutations of, 691
- absence of, 679
- Offspring of diabetic parent. *See also*
- Familial diabetes
- diabetes and deafness in, 478
- disease-associated antibodies in, 1706
- perinatal autoimmunity in, 967
- same-sex parent in, 1585
- Oleate metabolism, troglitazone and pioglitazone and, 1556
- Onset of IDDM
- prophylactic insulin therapy and, 205
- recent, myocardial
- metaiodobenzylguanidine uptake in, 801
- Oophorectomy, insulin resistance after, 615
- Otsuka-Long-Evans-Tokushima Fatty rat, islet proliferation defect in, 941
- Oxidation
- of LDL, susceptibility to, 762
- of phenylalanine, hyperglucagonemia and, 463
- Oxidative stress
- hyperglycemia and, 471
- P**
- Pancreas
- bioartificial, functional kinetics of, 1102
- mucosal lymphocyte homing to, in NOD mouse, 1173, 1181
- vascularized bioartificial, 342
- Pancreatic transplantation
- dose-response insulin effects after, 1267
- free fatty acid metabolism after, 354
- hepatic insulin resistance after, 134
- PC-1, insulin sensitivity and, 980
- PDGF receptor. *See* Platelet-derived growth factor receptor
- PDX-1
- in HIT-T15 cell activation, 1478
- insulin and glucokinase induction by, betacellulin and, 1826
- Pentosidine, in ocular lens, glycemic threshold for, 587
- Peripheral blood monocyte, IL-6 and $\text{TNF-}\alpha$ production in, in hyperglycemia, 954
- Perivascular neuropathy, sensorimotor, 139
- Perivascular space, giant, in NOD mouse thymus, 1535
- PG. *See* Prostaglandin
- Phenylalanine, oxidation of, hyperglucagonemia and, 463
- Phlorizin, albumin and HNF-1 restoration by, 1217
- Phogrin
- autoantibodies to, 1344
- identification of, 1187
- Phosphatidylinositol 3-kinase
- IGF-I stimulation of, in muscle, 869
- wortmannin inhibition of, 854
- PI 3-kinase. *See* Phosphatidylinositol 3-kinase
- Pima Indians, linkage at rodent obesity genes in, 1229
- Pioglitazone
- dietary fructose with and without, VLDL kinetics and, 806
- oleate metabolism and, 1556
- Platelet, insulin-induced cGMP increase in, nitric oxide and, 768
- Platelet-derived growth factor receptor, in angiopathy, 507
- Portal insulin, hepatic glucose production and, 1594
- Potassium channel

- ATP-sensitive
after islet transplantation, 1755
genetic markers for, 267
diadenosine polyphosphates and, 1431
imidazoline inhibition of, insulin secretion and, 1610
in islet, 267, 845, 1431, 1755
- Pregnancy, antioxidants in, congenital malformation and, 1497
- Proglucagon, nutrients and, 434
- Prohormone convertase 3, genetic organization and mutations of, 897
- Proinsulin
biosynthesis of, in MIN6 cell, 37
as risk marker for coronary artery disease, 736
- Prostaglandin
insulin deficiency and, 602
mesangial cell proliferation and, 44
- Protein
contractile, mesangial phenotypic modulations and, 488
dietary, urea synthesis and, 667
metabolism of
amino acids and, 393, 1245
insulin in, 1245
- Protein kinase C
in soleus muscle, 1396
transcriptional activation by, LY290181 and, 642
- Protein phosphatase-1, hexosamine regulation of, 322
- Protein RT6, T-cell activation and, 1419
- Protein tyrosine phosphatase 1B, insulin receptor interaction with, 1379
- Puberty, nephropathy and, 51
- Purine nucleotides, IL-1 β and, 1783
- Pyruvate carboxylase, in islet normalization of, 886
of Zucker rat, 1626
- Q**
QT interval, insulin level and glucose tolerance and, 376
- R**
rad gene, polymorphism in, 429
Receptor-ligand traffic, vanadate and, 1084
reg gene, in NOD mouse, 67
Remission, of NIDDM, 337
Renal disease. *See also* Nephropathy
amlodipine for, 216
cilazapril for, 216
TGF- β in, 522
Retinal metabolism, antioxidants and, 1233
Retinal pericytes, VEGF receptors in, 1016
Retinopathy
beraprost sodium for, 361
in DCCT report, 270
RT6 protein, T-cell activation and, 1419
- S**
Sciatic nerve
endothelin-induced ischemia of, 627
regenerating, GAP-43 immunoreactivity in, 199
L-Selectin, homing of, to NOD mouse pancreas, 1173, 1181
Sensorimotor perivascular neuropathy, 139
Skeletal muscle
blood flow in, insulin and, 1471
glutamine:fructose-6-phosphate amidotransferase in, 302
GLUT4 in
glucose ingestion and, 1051
insulin action and, 23, 28
transgenic mice expressing, 23
glycogen synthase activity in, acquired defects of, 400
glycoprotein PC-1 in, obesity and insulin resistance and, 1324
insulin resistance in
after oophorectomy and testosterone treatment, 615
glucose transport and phosphorylation and, 915
 α -lipoic acid and, 1024
metabolic impairment before, 651
Smooth muscle
arterial, endothelin-induced Ca²⁺ signaling in, 876
vascular. *See* Vascular smooth muscle
Soleus muscle
IGF-I stimulation of PI 3-kinase in, 869
protein kinase C in, 1396
Somatostatin secretion, enterostatin and, 1157
Steroid hormones, insulin resistance and, 615
Subfornical organ, GLP-1 receptor in, 832
Sulfonylurea, insulin secretion stimulated by, mechanisms of, 1792
Sulfonylurea receptor
extrapancreatic, 1439
genetic variants in, in Caucasians, 825
Superoxide anion, glucose-derived, Ca²⁺/EDRF signaling and, 1386
Susceptibility genes. *See* Genetic markers
Sympathetic nervous system, insulin effects on, 15
- T**
T-cell
activation of, protein RT6 mediation of, 1419
autoantigen response of, 1147
diabetogenic, 1299
T-cell epitope, MHC class II processing of insulin into, 1711
T-helper 1 cell, cytokines in, in insulinitis, 749
TAP-1. *See* Transporter associated with antigen processing (TAP)-1
Tendon, collagen in, AGE inhibitor and aminoguanidine effects on, 1694
Testosterone therapy, insulin resistance after, 615
TGF- β . *See* Transforming growth factor- β
Thiazolidinedione, for insulin resistance and NIDDM, 1661
Thymus, of NOD mouse, giant perivascular space formation in, 1535
TNF. *See* Tumor necrosis factor
Tolbutamide, cAMP synergy with, β -cell Ca²⁺ and, 295
Topoisomerase II, as autoantigen, 408
Transfer of diabetes, in NOD mouse, CD4⁺ T-cell clone in, 328
Transforming growth factor- β
in renal disease, 522
Transgenic mouse
nephropathy in, 56
skeletal muscle GLUT4 in, 23
Transplantation
of islet. *See* Islet transplantation
Transporter associated with antigen processing (TAP)-1, in pancreatic endocrine cells, cytokines and, 779
Triglyceride
intraluminal, proglucagon expression and, 434
Trinucleotide repeat-containing gene, in islet, 157
Troglitazone
insulin sensitivity and, 1572
islet function and, 1572
leptin production and, 1276
oleate metabolism and, 1556
ventricular myocytes and, 1822
Tumor necrosis factor- α
in hyperglycemia, 954
islet dysfunction and, 183
neutralization of, 881
Twins, islet autoimmunity concordance in, 1284
Tyrosine phosphatase antigen, 1187
- U**
U.K. Prospective Diabetes Study, 1655
Urea synthesis, portal insulin therapy and food protein content and, 667
- V**
Vacor intoxication, mitochondrial complex I and, 1531
Vanadate
albumin and HNF-1 restoration by, 1217
receptor-ligand traffic and, 1084
Vanadyl sulfate, insulin sensitivity and, 659, 1285
Vascular dysfunction
Vascular endothelial growth factor (VEGF) receptor, in retinal pericytes, 1016
Vasoconstriction response, to endothelin 1, 105
Vasodilation, insulin effects on, 15
Ventricle, myocyte in, troglitazone and, 1822
Very-low-density lipoprotein, kinetics of, dietary fructose with and without pioglitazone and, 806
Visceral fat. *See* Abdominal fat
VLDL. *See* Very-low-density lipoprotein
Voltage-dependent Ca²⁺ channel, phosphorylation of, in islet, 1412
- W**
Weight loss. *See also* Obesity
leptin injection and, 1446
monounsaturated fatty acids in, 569
Wistar rat, VLDL triglyceride kinetics in, dietary fructose with and without pioglitazone and, 806
Wortmannin
insulin secretion and, 854
PK 3-kinase inhibition by, 854
- Z**
Zucker rat
glycogen synthesis in, soleus muscle protein kinase C and, 1396
islet enzymes in, 1626
Zutphen Elderly Study, QT interval in, insulin level and glucose tolerance and, 376

Author Index

A

Abate, N., 1684
 Abdel-Halim, S.M., 934
 Abdel-Wahab, Y.H.A., 1132, 1489
 Aberdeen, J., 139
 Abrahamsen, N., 725
 Abrams, L., 400
 Ackerley, C.A., 513
 Adams-Huet, B., 1684
 Adlerberth, A., 1605
 Aguilar-Bryan, L., 825
 Ahrén, B., 1306, 1580
 Ah-Sing, E., 1132
 Aiello, L.P., 1016
 Åkerblom, H.K., 178, 1706
 Alcalde, L., 779
 Alejandro, R., 718
 Alonso, M., 718
 Amano, N., 806
 Amstad, P., 471
 Andersen, H., 440
 Andersen, H.U., 771
 Andersen, L., 242
 Anderson, J.H., 1750
 Andersson, A., 1197
 Andreu, E., 1755
 Andrews, K.M., 60
 Anello, M., 502
 Anfossi, G., 768
 Angelov, I., 1329, 1734
 Aoki, M., 157, 262
 Araki, N., 1037
 Araki, S., 675
 Aranda, O., 1541
 Argaud, D., 1563
 Armengol, M.P., 779
 Armstrong, D., 1233
 Asano, T., 1037, 1238
 Ashley, S., 385
 Assimacopoulos-Jeannet, F., 190
 Atkinson, A.B., 683
 Atkinson, M.A., 205
 Auerbach, S., 679
 Averill, N., 1121
 Avignon, A., 1396
 Avogaro, A., 602, 1373
 Azen, S., 1572

B

Baba, M., 56
 Baeza, N.J., 67
 Bain, S.C., 1503
 Baird, J.D., 1463
 Balcom, J.H., 1594
 Balfe, J.W., 51
 Ballard, F.J., 170
 Banerji, M.A., 337
 Barazzoni, R., 463
 Barnett, C.R., 1132, 1489
 Barone, M., 679
 Barrera-Hernandez, G., 1217
 Barrow, B.A., 1524
 Baruffaldi, L., 316
 Barzilai, N., 1329, 1734
 Basdevant, A., 687
 Baskin, D.G., 531
 Baura, G.D., 86

Beattie, G.M., 1223
 Beaudet, L.N., 284
 Beck, J., 1336
 Beck-Nielsen, H., 947
 Behn, P., 262
 Belai, A., 139
 Bell, G.I., 267, 291, 1503
 Bell, P.M., 683
 Bergerot, I., 1181
 Berggren, P.-O., 580, 934, 1610
 Bergman, R.N., 742, 1547
 Bergstrom, R.W., 1010
 Berhanu, P., 1379
 Berkowitz, K., 1572
 Berne, C., 1427
 Bhattacharjee, A., 1678
 Bianchi, E., 354
 Bier, D., 863, 915
 Biessels, G.J., 1259
 Bingley, P.J., 1720
 Biolo, G., 463
 Birch, K.A., 642
 Birkett, M.A., 1750
 Björk, E., 1427
 Björntorp, P., 615, 1605
 Blanché, H., 478
 Blangero, J., 563
 Bloom, S.R., 434
 Blum, J., 1711
 Blum, W.F., 1435
 Boden, G., 699, 1044
 Bogardus, C., 679, 1229
 Boilly, B., 1108
 Boitard, C., 101
 Bollen, M., 980
 Bolli, G.B., 1245
 Bonadonna, R.C., 915
 Bone, A.J., 183
 Bonner-Weir, S., 385, 1161
 Bonnevie-Nielsen, V., 818
 Bonora, E., 915
 Bortell, R., 1419
 Botnia Study, The, 1585
 Bouchard, C., 1405
 Bougnères, P.-F., 101
 Bowman, M.A., 205
 Bowsher, R., 242
 Boyd-White, J., 348
 Boyko, E.J., 1010
 Bragg, K.L., 370
 Brand, C.L., 1076
 Brdiczka, D., 113
 Brocco, E., 216
 Brothers, J., 695
 Brown, K.S., 1670
 Brown, L.J., 639
 Bruggink, J.E., 1102
 Brun, T., 190
 Brunetti, P., 1245
 Bruni, N., 891
 Brunicardi, F.C., 385
 Bryan, J., 825
 Bucci, A., 863
 Buchanan, K.D., 1524
 Buchanan, T.A., 1572
 Bugawan, T.L., 610
 Bukowski, T.R., 531
 Burant, C.F., 1439
 Burcelin, R., 28
 Burgoyne, J.L., 170
 Burnstock, G., 139
 Buschard, K., 818, 1197
 Butler, P.C., 1094, 1317, 1792
 Byrne, M.M., 478, 1503

C

Calabrò, A., 602
 Calles, J., 1051
 Caltabiano, V., 502
 Cambien, F., 367
 Campbell, L., 205
 Campbell, L.V., 633
 Cardon, L.R., 687
 Cardona, O., 1396
 Carel, J.-C., 101
 Carey, A., 687
 Carey, D.G., 633
 Carey, D.G.P., 1358
 Carlsson, M., 429
 Carnaud, C., 1535
 Caro, J.F., 699, 992, 1276, 1455, 1511
 Carraro, A., 216
 Castellino, P., 393
 Cather, C., 691
 Cavalot, F., 768
 Ceriallo, A., 471
 Cernigoi, A.M., 216
 Cerutti, P., 471
 Chaiken, R.L., 337
 Chait, P.G., 51
 Chakrabarti, D., 1336
 Chance, R., 242
 Chandler, C.S., 170
 Chang, J.D., 610
 Chang, Y.-H., 408
 Charles, A., 385
 Charlesworth, J., 1094
 Charlton, B., 71, 1063
 Charron, M.J., 28
 Chase, H.P., 926
 Chassereau, C.N., 762
 Chen, E., 291
 Chen, W., 1734
 Chen, X., 1044
 Cheng, C., 627
 Cherrington, A.D., 1594, 1805
 Cheung, A., 385
 Chisholm, D.J., 633
 Chiu, K.C., 157
 Chong, P., 1084
 Christiansen, E., 1267
 Christianson, G.J., 902
 Christie, M.R., 967, 1187
 Christoffersen, C.T., 1435
 Chu, C.A., 1594
 Chua, M., 1141
 Chua, S.C., Jr., 1141, 1229
 Chung, W.K., 1141, 1229
 Chutkow, W.A., 1439
 Ciaraldi, T.P., 400
 Cirulli, V., 496
 Clausen, J.O., 1115
 Clément, K., 478, 687
 Clemmons, D.R., 91
 Cobelli, C., 915, 1373
 Cohen, I.R., 1168
 Cohen, N., 659
 Cohen, P., 1734
 Cohen, R.M., 736
 Collins, H., 854
 Collins, V.R., 1367
 Colomb, E., 1535
 Colovai, A.I., 1761
 Concannon, P., 291
 Connolly, C.C., 1805
 Considine, E.L., 992
 Considine, R.V., 699, 992, 1276, 1455, 1511
 Conti, M., 316
 Coppack, S.W., 984
 Corbett, J.A., 1783
 Corkey, B.E., 190, 273
 Costa, M., 779
 Couce, M., 1094
 Cox, N.J., 267
 Craft, S., 1030
 Crepaldi, C., 602
 Crepaldi, G., 602
 Croitoru, K., 902
 Crook, E.D., 322, 1003
 Cruciani, G., 1245
 Cryer, P.E., 1030
 Cunningham, J.M., 183
 Curiel, D.T., 1197
 Cusin, I., 1446
 Czech, M.P., 1419

D

Dagogo-Jack, S., 695
 D'Agostino, R., Jr., 742
 D'Agostino, R.B., Jr., 1547
 Dailey, G., 863
 Dammerman, M., 679
 Daneman, D., 51
 Daniele, N., 891
 Daniels, M.C., 302
 Dardenne, M., 1535
 Darrow, B.L., 205
 Davalli, A.M., 1161
 David, G.B., 595
 Davidoff, A.J., 1822
 De Feo, P., 1245
 De Filippo, G., 101
 De Haan, B.J., 1102
 De Paepe, M., 1814
 De Vos, P., 1102
 Deeb, S.S., 422
 Deems, R.O., 1516
 DeFronzo, R.A., 302, 393, 915
 Degano, C., 502
 Degli Esposti, M., 1531
 Dekker, J.M., 376
 Del Prato, S., 915
 Delaney, C.A., 183
 Dell, C., 642
 dello Russo, P., 471
 Delovitch, T.L., 1711
 Demeais, F., 687
 Dent, E.W., 199
 D'Erme, M., 1193

- Després, J.-P., 1405
 Di Carlo, V., 354
 Di Mario, U., 1193
 Diabetes Control and
 Complications Trial
 Research Group, 1289
 Dick, G.M., 876
 Dietze, G.J., 1024
 Dinesen, B., 242
 Ding, Y., 691
 Dionisi, S., 1193
 Dionne, F.T., 1405
 Dodesini, A.R., 354
 Doherty, C.C., 1204
 Dohm, G.L., 1324
 Dominguez, L.J., 1822
 Donis-Keller, H., 157, 789
 Dorsey, D.A., 284
 Dosch, H.-M., 513
 Dotta, F., 1193
 Doukas, J., 1209
 Dowse, G.K., 1367
 Dresel, S., 801
 Dronsfield, M.J., 1503
 Dua, A., 1635
 Dudley, M.E., 902
 Dukes, I.D., 845
 Dunger, A., 183
 Dunleavy, K., 342
 Dunlop, M.E., 44
 Dunn, M.E., 1572
 Durinovic-Belló, L., 795
 Dybdal, N., 812
 Dyrberg, T., 818
- E**
 Ebara, T., 806
 Efanov, A.M., 1610
 Efanova, I.B., 1610
 Efendić, S., 886, 934, 1610
 Egan, J.J., 1694
 Ehrnström, B.-O., 1585
 Eisenbarth, G.S., 926, 1193, 1344
 Eisenhower, E., 736
 Elzirik, D.L., 1197
 Ekstrand, A., 974
 Elbein, S.C., 370, 825
 Elias, D., 1168
 Ellerman, K.E., 557
 Elliott, T., 974
 Ellis, T.M., 205
 Elmstahl, S., 1580
 El-Sheikh, A., 749
 Engerman, R.L., 270, 587, 1233
 Englaro, P., 1435
 Ennis, C.N., 683
 Eriksson, U.J., 1497
 Erkelens, D.W., 1259
 Erlich, H.A., 610
 Estacio, R.O., 79
 Estrada, D.E., 1798
 European Group for the Study of
 Insulin Resistance, 947
 Ewart, H.S., 1516, 1798
- F**
 Fabien, N., 1181
 Fajans, S.S., 1503
 Fanelli, C., 695
 Fanelli, C.G., 1030
 Fantus, I.G., 1084
 Farese, R.V., 1396
 Fathman, C.G., 71, 1063
 Ferrannini, E., 915, 947
 Ferrer, J., 262, 825
 Feskens, E.J.M., 376
- Fiet, J., 478
 Figarella, C.G., 67
 Fineberg, N.S., 1750
 Fineberg, S.E., 1750
 Fioretto, P., 216
 Fischer, U., 667
 Fisher, S., 148
 Flamez, D., 257
 Flatt, P.R., 1132, 1489
 Fleischer, N., 1412
 Flier, J.S., 679, 909, 1638
 Flye, M.W., 144
 Fogarty, D.G., 1204
 Fogarty, J., 587
 Fogt, D.L., 1024
 Forquet, F., 1711
 Forsblom, C., 1585
 Forsén, B., 1585
 Foster, D., 531
 Foster, D.M., 86
 Frank, B., 242
 Franssila-Kallunki, A., 974
 Frascerra, S., 915
 Fraser, J.R.E., 44
 Frazier, M.L., 563
 Frederick, R.C., 909
 Fresu, P., 216
 Freund, J., 633
 Freyse, E.-J., 667
 Friedman, J.M., 679
 Friedman, R., 974
 Frigato, F., 216
 Froguel, P., 157, 478, 687, 725,
 1503
 Fu, J., 1678
 Füchtenbusch, M., 967
 Fujimoto, J., 56
 Fujimoto, W.Y., 422, 1010
 Fujisawa, K., 954
 Fujitani, Y., 1478
 Fukasawa, H., 361
 Fulgencio, J.-P., 1556
 Fuller, C.R., 434
 Furuta, H., 291
 Futata, T., 1037
- G**
 Gabbay, K.H., 544
 Gallagher, K., 242
 Galli, L., 316
 Galichan, W.S., 902
 Galloway, L., 1396
 Gambino, V., 291
 Gao, Z., 854
 Garg, A., 1684
 Garner, C., 687
 Gautier, N., 869
 Gempel, K., 113
 Genereux, P.E., 60
 George, R., 1084
 Gerbitz, K.-D., 113
 Gerich, J., 863
 Ghatei, M.A., 434
 Ghosh, S., 1
 Giacca, A., 454
 Gianani, R., 926, 1193
 Gibbs, E.M., 60
 Gibson, R.G., 1750
 Gilman, S., 385
 Gingerich, R., 242
 Gingerich, R.L., 822
 Giordano, M., 393
 Girard, J., 23, 1556
 Gispén, W.H., 1259
 Goico, J., 1572
 Gold, G., 1610
- Goldfine, I.D., 1324
 Goldstein, D., 242
 Goodyear, L.J., 1051
 Gorus, F., 1814
 Goss, J.A., 144
 Gotoda, T., 507
 Gough, S., 157
 Graier, W.F., 1386
 Green, E.D., 691
 Green, I.C., 183
 Green, M.H.L., 183
 Greenbaum, C.J., 1631
 Greiner, D.L., 1419
 Gremlich, S., 257
 Gribble, F.M., 1524
 Grill, V., 580
 Groenewoud, Y., 454
 Groop, L.C., 354, 429, 1585
 Groop, P.-H., 974
 Grossman, E.B., 569
 Grundy, S.M., 1684
 Guazzini, B., 316
 Guberski, D.L., 557
 Guenifi, A., 934
 Gulli, G., 915
 Gumbiner, B., 569
 Guo, J., 522
 Gupta, K., 1619
 Guth, P., 385
 Guy-Grand, B., 687
- H**
 Haaparanta, M., 1471
 Hadro, E., 1638
 Haffner, S.M., 242, 742, 822, 1547
 Hager, J., 687, 725
 Halberstam, M., 659
 Hales, C.N., 242
 Halter, J.B., 148
 Hamada, Y., 361
 Hamaguchi, K., 1826
 Hamman, R.F., 742, 1547
 Hanabusa, T., 897, 1279
 Hanafusa, T., 1826
 Hanis, C.L., 291
 Hänninen, A., 1173
 Hansen, B.V., 367
 Hansen, L.H., 725
 Hansen, T., 1115
 Hara, T., 361
 Harbeck, M.C., 711
 Hardy, R.W., 1619
 Harris, P.E., 1761
 Harris, T.J.R., 687
 Harrison, C.R., 563
 Harron, J.C., 1204
 Hashimoto, M., 675
 Haskins, K., 328, 1299
 Haslbeck, M., 801
 Hastings, J.R., 1805
 Hattersley, A.T., 1503
 Hauner, H., 1435
 Havel, P.J., 960
 Havranek, E.P., 79
 Hawkes, C.J., 967, 1187
 Hawkins, M., 1329, 1734
 Hayami, T., 1701
 Hayek, A., 496, 1223
 Hayes, J.R., 105
 Heath, W.F., 642
 Heimberg, H., 257
 Heinze, E., 1435
 Hennes, M.L., 1635
 Henrich, J., 1336
 Henriksen, E.J., 1024
 Henry, R.R., 400, 699
- Herbst, J.J., 60
 Hermayer, K.L., 762
 Hermeling, R.N., 642
 Hershey, T., 1030
 Hettiarachchi, M., 415
 Heydrick, S.J., 869
 Hilden, H., 354
 Hill, C., 1729
 Hirano, T., 806
 Hirshman, M.F., 1051
 Ho, K.K.Y., 415
 Hoffman, M.D., 370, 825
 Hoffmann, R.G., 1635
 Hokama, J.Y., 1024
 Hollister, J., 1161
 Holmäng, A., 615
 Holst, J.J., 552, 832, 1076, 1267
 Horiuchi, S., 1037
 Horton, E.S., 1051
 Hother-Nielsen, O., 1267
 Hotta, N., 361
 Houseknecht, K.L., 1638
 Howard, G., 742
 Howard, T., 385
 Howland, J., 711
 Hoyt, E.C., 434
 Hozumi, T., 806
 Hu, M., 1329, 1734
 Huang, L., 28
 Huang, X., 812, 1336
 Hufferd, S., 1750
 Hughes, A.E., 1204
 Hultgren, B., 812
 Hummel, M., 795
 Hunter, S.J., 683
 Hurel, S., 881
 Hutton, J.C., 127, 1187, 1344
 Huypens, P., 257
 Hvidberg, A., 1030
 Hwang, J., 408
 Hyde, T.M., 992
- I**
 Ihara, Y., 1701
 Iida, H., 1471
 Ilonen, J., 178, 1706
 Imamura, M., 1121
 Inaba, T., 507
 Inagaki, N., 267
 Inchiostro, S., 463
 Inoue, H., 789, 825
 Insulin Resistance
 Atherosclerosis Study
 Investigators, 1547
 Intaglietta, M., 385
 Inukai, K., 1238
 Iori, E., 463
 Ipp, E., 385
 Ishibashi, F., 731
 Ishibashi, S., 507
 Ishida, Y., 806
 Ishihara, H., 37, 1238
 Ishii, M., 165
 Isomaa, B., 1585
 Iwasaki, N., 267, 291
- J**
 Jackson, R.A., 926
 Jacob, S., 1024
 Jakobsen, J., 440
 Jalkanen, S., 1173
 James, R.F.L., 1336
 Jansson, P.-A., 863
 Jaraquemada, D., 779, 1761
 Jarett, L., 242
 Jeanrenaud, B., 1446

Jeffers, B., 79
 Jelinek, L., 725
 Jenkins, A.B., 415, 633
 Jenkins, A.J., 762
 Jensen, P.B., 1435
 Jensen-Urstad, K.J., 1253
 Jensen-Urstad, M.T., 1253
 Jenssen, T., 863
 Jin, Y., 522
 Johnston, C.M., 642
 Johnston, G.D., 105
 Jones, S.L., 1729
 Jørgensen, P.N., 1076
 Jullien, D., 869
 Jury, C., 687

K

Kagimoto, S., 1701
 Kahn, B.B., 1638, 1644
 Kahn, S.E., 86, 422, 1631
 Kaiyala, K., 86
 Kajimoto, Y., 1478, 1826
 Kakei, M., 295
 Kakuta, H., 361
 Kalinowski, S.S., 1670
 Kamada, T., 1478
 Kamal, A., 1259
 Kammerer, C.M., 563
 Kämpe, O., 1427
 Kanao, K., 488
 Kane, L.A., 1094
 Kanegae, Y., 1238
 Kaneto, H., 1478
 Kanninen, T., 429
 Karanko, S., 1585
 Karges, W., 513
 Karibe, S., 267
 Karlsen, A.E., 771
 Karlsson, F.A., 1427
 Karter, A.J., 1547
 Kasatani, T., 165
 Kashiara, N., 488
 Kasuga, A., 165
 Kasuga, M., 675
 Katagiri, H., 1238
 Katz, E.B., 28
 Katz, R.J., 736
 Kawakami, M., 507
 Kawamori, R., 1478, 1826
 Kawamura, M., 267, 291, 507
 Kawasaki, E., 926, 1344
 Kawazu, S., 1121
 Kazumi, T., 806
 Kern, T.S., 270, 587, 1233
 Kerr-Conte, J., 1108
 Kershaw, E.E., 1141
 Keymeulen, B., 1814
 Khan, A., 934
 Kiekens, R., 1774
 Kikuchi, M., 1238
 Kim, J.K., 446, 651
 Kim, K.-H., 190
 Kindsvogel, W., 725
 King, G.L., 1016
 Kishimoto-Hashimoto, M., 675
 Kissebah, A.H., 1635
 Kiwanuka, E., 463
 Kjos, S.L., 1572
 Klarlund, J.K., 1419
 Klein, R.L., 762
 Klein, S., 984, 988
 Kleinman, R., 385
 Klemetti, P., 178
 Klip, A., 1516, 1798
 Klitz, W., 610
 Klootwijk, P., 376

Klöppel, G., 1774, 1814
 Knip, M., 1706
 Knowler, W.C., 1229
 Knowles, S.E., 170
 Knuuti, J., 1471
 Kobayashi, T., 622
 Kochakian, M., 1694
 Koh, N., 361
 Kohl, C., 1556
 Kokai, Y., 56
 Kolaczynski, J.W., 699, 1455, 1511
 Komatsu, M., 1766
 Kong, S.S., 718
 Konrad, R.J., 854
 Koranyi, L., 157
 Korbitt, G., 1814
 Korthals, J.K., 209
 Kosaka, K., 622
 Kosaki, A., 1744
 Koskela, P., 1706
 Kostner, G.M., 1386
 Kowluru, R.A., 1233
 Kraegen, E.W., 415
 Krakower, G.R., 1635
 Kreutter, D.K., 60, 1094
 Kromhout, D., 376
 Kubota, A., 1701
 Kuiper, J.L., 531
 Kukovetz, W.R., 1386
 Kuliawat, R., 1638
 Kulmala, P.K., 1706
 Kumagaye, K.Y., 1279
 Kurabayashi, T., T., 1358
 Kusari, J., 1379
 Kuwano, A., 789
 Kuzuya, H., 1744

L

Laakso, M., 947
 Lachov, E., 595
 Lacy, P.E., 144
 Laine, H., 1471
 Landt, M., 695, 984, 988
 Lang, Y., 1711
 Lange, A.J., 1563
 Lämsimies, E.A., 308
 Larkins, R.G., 44
 Larsson, H., 1580
 Larsson, O., 934, 1610
 Lasser, G., 531
 Lawson, M.L., 51
 Le Beau, M.M., 1439
 Le Marchand-Brustel, Y., 869
 Lea, R.G., 1463
 Lebovitz, H.E., 337
 Leconte-Houcke, M., 1108
 LeDuc, C., 687
 Lefebvre, J., 1108
 Leftevirta, M., 1585
 Leibel, R.L., 1141, 1229
 Leiser, M., 1412
 Leiter, E.H., 902
 Lenders, J.W.M., 15
 Lenti, L., 1193
 Leonetti, D.L., 1010
 Leppert, M.F., 370
 Leturque, A., 23
 Levy, J.C., 1524
 Lewis, G.F., 454
 Li, M., 1678
 Like, A.A., 557
 Lindblad, L.E.L., 1253
 Lindner, T., 291
 Lindstedt, G., 1605
 Ling, Z., 257, 1774
 Liu, L., 157, 779

Liu, S.-M., 1141
 Livingston, E., 385
 Ljungqvist, O., 1051
 Loizeau, M., 23
 Lönnroth, P., 615
 Lopes-Virella, M.F., 762
 Louie, D.C., 711
 Louit, A., 291
 Low, C.C., 569
 Lowe, J.E., 183
 Lowell, B.B., 909
 Lowitt, S., 209
 Lucidi, P., 1245
 Ludwig, D.S., 679
 Lund, P.K., 434
 Lupien, P.J., 1405
 Lutterman, J.A., 15
 Luzi, L., 354

M

Maas, D.L., 1635
 MacCher, J.W., 563
 Macdonald, I., 602
 MacDonald, M.J., 639, 886, 1626
 Maddux, B.A., 1324
 Madsbad, S., 552, 1267
 Maeshima, Y., 488
 Maffei, A., 1761
 Maffei, M., 679
 Mahadevan, P., 44
 Mahler, T., 1774
 Maioli, M., 216
 Maitra, S., 1563
 Majithia, H.R., 675
 Majno, G., 1209
 Maki, T., 342
 Mäkimattila, S., 302, 1364, 1471
 Makino, H., 488
 Malaisse, W.J., 1774
 Mally, M.I., 496, 1223
 Malmström, R., 1364
 Malone, J.L., 209
 Mandrup-Poulsen, T., 771
 Manjula, B.N., 1694
 Mäntysaari, M.J., 308
 Mantzoros, C.S., 909, 1638
 Maratos-Flier, E., 909
 Marco, C., 1511
 Marco, J., 1157
 Markuns, J.F., 1051
 Marliss, E.B., 148
 Marroquin, A., 1572
 Martikainen, A., 1706
 Martin, F., 1431, 1755
 Maruyama, T., 165
 Massucco, P., 768
 Masugi, J., 675
 Matschinsky, F.M., 223, 854
 Matsuoaka, T., 1826
 Matsuoaka, T.-A., 1478
 Matsuzawa, Y., 1826
 Mattiello, L., 768
 Mauricio, D., 771
 Maxwell, A.P., 1204
 Mayazaki, J.L., 165
 Mayer-Davis, E.J., 1547
 Mayorga, R., 825
 Mayorga, R.A., 370
 McClain, D., 302
 McClain, D.A., 322, 1003
 McClenaghan, N.H., 1132, 1489
 McCracken, J.E., 1463
 McCuskey, R., 385
 McDevitt, H.O., 705
 McFarland, N., 1336
 McGurk, C., 105
 McIntyre, S.S., 1463
 McLean, W.G., 199
 McNeish, J., 1094
 McPherson, R.K., 60
 Mebius, R.E., 705
 Meiri, K.F., 199
 Meng, J., 1037
 Menger, M., 385
 Menzel, S., 291, 1503
 Meredith, M., 1783
 Mereu, L.E., 291
 Merino, J.F., 1541
 Metz, S.A., 1783
 Michie, S.A., 705
 Miettinen, H., 822
 Miettinen, T.A., 755
 Mika, Y.H., 595
 Milan, D., 602
 Milarski, K.L., 1379
 Milde, K.F., 718
 Millns, H., 825
 Milner, P., 139
 Minassian, C., 891
 Mintz, D.H., 718
 Miranda, C., 209
 Miras-Portugal, M.T., 1431
 Mitchell, B.D., 563
 Mithieux, G., 891
 Miyagawa, J.-I., 1826
 Miyazaki, J., 1238
 Mizuno, A., 941
 Moens, K., 257
 Mogensen, C.E., 440
 Mohamed-Ali, V., 984
 Möller, M., 832
 Monacchia, F., 1245
 Monaco, A.P., 342
 Monnier, V.M., 587
 Montana, E., 1541
 Montanc, E., 1755
 Monti, L.D., 316
 Mookhtiar, K.A., 1670
 Moon, B., 679
 Moorjani, S., 1405
 Mordes, J.P., 1209, 1419
 Mori, H., 675
 Mori, K., 361
 Morino, N., 507
 Moriscot, C.I., 67
 Morohoshi, M., 954
 Morrison, N.A., 1358
 Morrow, L.A., 91
 Moses, A.C., 91
 Mosmann, T.R., 1350
 Mudaliar, S., 400
 Mudaliar, S.R., 699
 Muhr, D., 801
 Muir, E.M., 127
 Mularoni, E., 768
 Mularon, C.J.P., 342
 Munn, S., 1317
 Munn, S.R., 1792
 Muello, B., 216
 Murase, T., 622
 Myers, M.A., 1531
 Myers, S.R., 1805
 Myint, M., 1511
 Mykkänen, L., 742
 Myrsén, U., 1306

N

Nácher, V., 1541, 1755
 Nadeau, A., 1405
 Nagai, R., 488
 Nagaraj, R.H., 587
 Nakajima, K., 1279

- Nakamura, J., 361
 Nakanishi, K., 622
 Nakashima, E., 361
 Nakazaki, M., 1238
 Nanjo, K., 897, 1279
 Napoli, R., 1051
 Naruse, K., 361
 Natali, A., 915
 Neal, D.W., 1594, 1805
 Neophytou, P.I., 127
 Nerup, J., 771
 Nestorowicz, A., 262
 Nevin, N.C., 1204
 Newell-Morris, L., 1010
 Newkirk, J., 881
 Ngo, A., 1531
 Nielsen, F.S., 367
 Niki, T., 675
 Nikoulina, S.E., 400
 Nishimura, C., 56
 Nishimura, E., 725
 Niskanen, L.K., 308
 Nissén, M., 1585
 Noda, M., 1766
 Nojima, Y., 507
 Nolan, J.J., 699, 1276
 Noma, Y., 941
 Nomaguchi, H., 165
 Norman, R.A., 1229
 North, M., 687
 Nosadini, R., 216
 Nugent, A.G., 105
 Numano, F., 954
 Nurjhan, N., 863
 Nuutila, P., 1471
 Nyce, M.R., 699, 1276, 1511
- O**
 O'Brien, M., 91
 O'Brien, T.D., 1094
 O'Connell, P., 563
 Odaka, H., 806
 Ofei, F., 881
 Ohagi, S., 897, 1279
 Ohannesian, J., 1511
 O'Harte, F.P.M., 1132, 1489
 Ohgawara, H., 267
 Oikonen, V., 1471
 Oka, Y., 37, 1238
 Okada, N., 1141
 Okamoto, H., 67
 Okamoto, K., 488
 Olefsky, J., 699
 Olefsky, J.M., 1276, 1379, 1661
 Omori, Y., 267, 291
 Omri, G., 595
 O'Neil, J.J., 342
 Opentanova, I., 1511
 Orgiazzi, J., 1181
 Orho, M., 429
 Ørskov, C., 832
 Oskarsson, P., 1427
 Östenson, C.-G., 886, 934, 1610
 Ota, Z., 488
 Otonkoski, T., 496, 1223
 Otsu, I., 342
 Owens, P.C., 170
 Owerbach, D., 544
 Ozawa, Y., 165
- P**
 Palmer, J.P., 1631
 Palti, Y., 595
 Pan, W., 1563
 Paolisso, G., 947
 Papadopoulos, K.P., 1761
- Paramore, D., 695
 Park, B.-J., 1121
 Parving, H.-H., 367
 Passa, P., 478
 Passaro, E., Jr., 385
 Pastori, R.L., 718
 Patanè, G., 502
 Pattou, F., 1108
 Pavan, P., 602
 Payton, M.A., 967
 Pecori, N., 915
 Pedersen, O., 1115, 1267
 Pégrier, J.-P., 1556
 Pekiner, C., 199
 Permutt, M.A., 157, 262, 789, 825
 Perriello, G., 863
 Perry, L.J., 576
 Perseghin, G., 354
 Persson, L.M., 60
 Peshock, R.M., 1684
 Peters, R., 1572
 Petersen, J.S., 771
 Peterson, J.D., 328
 Peterson, L., 1535
 Petrzika, M., 667
 Phan, C.V., 316
 Philippi, A., 687
 Philipson, L.H., 845
 Piarulli, F., 602
 Piatti, P., 316
 Pietropaolo, M., 513, 926
 Pilks, S.J., 1563
 Pintor, J., 1431
 Pipeleers, D., 257, 1774, 1814
 Pipeleers-Marichal, M., 1774
 Piretto, V., 768
 Pociot, F., 771
 Poirier, O., 367
 Polonsky, K.S., 242, 478, 1503, 1626
 Pontiroli, A.E., 316
 Pool, J., 376
 Pørksen, N., 1317
 Pørksen, N.K., 1792
 Porte, D., 242
 Porte, D., Jr., 86, 422, 531
 Poulsen, P.L., 440
 Poulsen, S.S., 832
 Power, R.F., 749
 Power-Kehoe, L., 1141, 1229
 Poznansky, M.J., 1084
 Pozza, G., 316, 354
 Prentki, M., 190, 273
 Previti, M., 1193
 Price, R.A., 691
 Province, M., 825
 Proye, C., 1108
 Prud'homme, D., 1405
 Prunkard, D.E., 531
 Pueyo, M.E., 478
 Pujol-Borrell, R., 779
 Purrello, F., 502
- Q**
 Qu, D., 909
 Quartier, E., 257
- R**
 Rabaglia, M.E., 1783
 Rabinovitch, A., 749, 1350
 Rabuazzo, A.M., 502
 Rachman, J., 1524
 Raffel, L.J., 610
 Rais, N., 675
 Raitakari, M., 1471
 Rajotte, R.V., 1350
- Ramakers, G.M., 1259
 Ramlal, T., 1516, 1798
 Rascher, W., 1435
 Ratcliff, H., 1489
 Ratner, R.E., 736
 Raurell, M., 1541
 Ravussin, E., 679, 1229
 Reboldi, G., 1245
 Rebrin, K., 667
 Reed, D.R., 691
 Regensteiner, J.G., 79
 Reichard, P.G., 1253
 Reichart, D.R., 1379
 Reifel-Miller, A., 642
 Reijonen, H., 178, 1706
 Reimers, J.I., 771
 Reinhart, L., 563
 Reiser, K.M., 284
 Ren, J., 1822
 Renaud, W.P., 67
 Rewers, M., 742
 Rhodes, C.J., 37
 Ricard, S., 367
 Richards, C.A., 557
 Rietzsch, H., 291
 Rigby, M.R., 1419
 Riggs, A.C., 157, 262, 789
 Rincon, J., 615
 Ripoll, C., 1431
 Robbins, D.C., 242
 Robert, J.-J., 478
 Roberts, R.E., 199
 Robertson, R.P., 134
 Robinson, G.W., 1670
 Roche, E., 190
 Roche, P., 1094
 Rodríguez-Gallardo, J., 1157
 Roep, B.O., 1147
 Rohane, P., 71
 Rohner-Jeanrenaud, F., 1446
 Roll, U., 967
 Rooney, D.P., 134
 Roopenian, D.C., 902
 Rosenthal, K.L., 902
 Rosfors, J.S., 1253
 Rossetti, L., 659, 1329, 1734
 Rossing, P., 367
 Rossini, A.A., 1419
 Rothenberg, P.L., 711, 854
 Rotter, J.L., 610
 Rovira, J.M., 1431
 Rubin, J.S., 1223
 Ruotsalainen, U., 1471
- S**
 Saad, M.F., 742, 1547
 Saba-Siddique, S., 1396
 Saccomani, M.P., 915
 Sacerdoti, D., 602
 Saito, I., 1238
 Sakagashira, S., 1279
 Sakaguchi, H., 897
 Sakakibara, F., 361
 Sakamoto, N., 361
 Sakata, N., 1037
 Saker, P.J., 639
 Saldeen, J., 1197
 Salem, A., 209
 Salmi, M., 1173
 Salminen, M., 23
 Salomaa, V., 755
 Saltiel, A.R., 1379, 1661
 Sanchez-Andrés, J.V., 1755
 Sanke, T., 897, 1279
 Sano, T., 941
 Santamaria, P., 1121
- Saruta, T., 165
 Sasson, S., 1324
 Saukkonen, T., 1706
 Savage, P.J., 742
 Savage, S., 79
 Savilahti, E., 178
 Savino, W., 1535
 Sawant, N., 675
 Sbraccia, P., 1324
 Scaglia, L., 1161
 Schatzberger, R., 595
 Schmidt, R.E., 284
 Schmitz, O., 1792
 Schneider, T., 667
 Schnell, O., 801
 Schork, N.J., 1
 Schouten, E.G., 376
 Schrier, R.W., 79
 Schröder, H.-E., 291
 Schuit, F., 257
 Schuit, F.C., 1774
 Schulze, J., 291
 Schuppin, G.T., 37
 Schwartz, M.W., 86, 531
 Scognamiglio, R., 602
 Seeley, R.J., 531
 Seely, B.L., 1379
 Segal, K.R., 988
 Seino, S., 267
 Seino, Y., 1701
 Sekikawa, T., 488
 Selby, J.V., 742, 1547
 Sell, D.R., 587
 Sener, A., 1774
 Serreze, D.V., 902
 Shamoon, H., 659
 Shang, H.-F., 408
 Shaper, A.G., 576
 Sharma, K., 522
 Sharp, G.W.G., 1766
 Shaw, S.J., 610
 Shek, W.R., 557
 Sheridan, B., 683
 Shima, K., 941
 Shimada, A., 71, 165, 1063
 Shimomura, H., 1279
 Shipman, P.A., 563
 Shlimovich, P., 659
 Sholinsky, P., 1547
 Sigal, R.J., 148
 Silvestre, R.A., 1157
 Simán, C.M., 1497
 Simecek, S., 1386
 Simell, O., 1173
 Simon, M.C., 1439
 Sindelar, D.K., 1594
 Sinha, M.K., 1455
 Sipilä, H., 1471
 Sjöholm, Å., 1057
 Skelly, R.H., 37
 Skyles, J., 242
 Smith, C., 642
 Smith, U., 947
 Smith, W., 1463
 Smith-Monroy, C., 1670
 Smits, P., 15
 Snickars, B., 1585
 Snider, D.P., 902
 Sochett, E.B., 51
 Soeller, W., 1094
 Soler, J., 1541
 Solin, O., 1471
 Solomon, B.A., 342
 Someya, Y., 1701
 Somoza, N., 779
 Somwar, R., 1516

- Sonnenberg, G.E., 1635
 Sopwith, M., 881
 Sorensen, O., 749
 Soria, B., 1431, 1755
 Soto, G., 496
 Sowers, J.R., 1822
 Speck, E., 1711
 Spencer, B., 1396
 Spielman, R.S., 291
 Spitzer, J., 60
 Spruijt, B.M., 1259
 Stagner, J., 385
 Stalmans, W., 980
 Standaert, M.L., 1396
 Standl, E., 801
 Staubs, P.A., 1379
 Steers, J., 1317
 Steers, J.L., 1792
 Stefan, C., 980
 Stern, M.P., 563, 822
 Stevenson, R.W., 60
 Stewart, T.A., 812, 1336
 Stoffel, M., 639, 679
 Stone, L.M., 422
 Stramm, L., 642
 Strandberg, T.E., 755
 Strandell, E., 1197
 Stray-Gundersen, J., 1684
 Streeper, R.S., 1024
 Stricker-Krongrad, A., 1446
 Strubbe, J.H., 1102
 Stumvoll, M., 863
 Sturek, M., 876
 Sturis, J., 478, 1503
 Suarez-Pinzon, W., 749, 1350
 Suciu-Foca, N., 1761
 Sugimoto, K., 56
 Sugiyama, H., 488
 Sun, H., 627
 Sundler, F., 1306
 Suresh, A., 205
 Susulic, V.S., 909
 Svendsen, I., 1076
 Swanson, M.S., 1324
 Swanston-Flatt, S.K., 1132
 Swick, A.G., 60
- T**
 Tack, C.J.J., 15
 Takagi, H., 1016
 Takebayashi, S., 1037
 Takei, I., 165
 Talley, M., 679
 Taminato, T., 1701
 Tamori, Y., 675
 Tang, J., 1626
 Tang, S., 1084
 Taniguchi, H., 675
 Tanizawa, Y., 789
 Tapscott, E.B., 1324
 Tarnow, L., 367
 Tartaglia, L.A., 1141
 Tashiro, F., 165
- Taskinen, M.-R., 354, 974, 1585
 Tatsuta, H., 897
 Taylor, R., 881
 Taylor-Edwards, C., 1063
 Tchernof, A., 1405
 Teller, W., 1435
 Teramo, K., 1706
 Teräs, M., 1471
 Terkamp, C., 1030
 Terruzzi, I., 354
 Tessari, P., 463
 Theos, V., 415
 Thien, T., 15
 Thivolet, C., 1181
 Thompson, D.B., 1229
 Thorens, B., 257
 Tibblin, G., 1605
 Tibell, A., 1267
 Tiengo, A., 463, 602
 Tilton, R.G., 284
 Tisch, R., 705
 Toffolo, G., 1373
 Toft-Nielsen, M., 552
 Tomas, F.M., 170
 Tonolo, G., 216
 Tornqvist, H., 1435
 Töyry, J.P., 308
 Trabb, J.B., 291
 Tritschler, H., 1798
 Tritschler, H.J., 1024
 Trovati, M., 768
 Tsai, S.-T., 408
 Tsakiridis, T., 1798
 Tsao, T.-S., 28
 Tsay, Y.H., 1670
 Tsuda, K., 1701
 Tu, J., 1068
 Tuch, B.E., 1068
 Tuomi, T., 1585
 Turner, R., 825
 Turner, R.C., 639, 1524
- U**
 Uchimura, I., 954
 Ueda, K., 789
 Ueno, H., 675
 Ulshen, M.H., 434
 Umayahara, Y., 1478
 Urbain, J.L., 1044
 Urban, L.J., 1259
 Urhammer, S.A., 1115
 Utraiainen, T., 1364, 1471
 Utsugi, T., 1121
 Uusitupa, M.L.J., 308
- V**
 Vaarala, O., 178
 Valentin, M.A., 1516
 Valerio, A., 602, 1373
 Valverde, C., 960
 Van Epps-Fung, M., 1619
 Van Obberghen, E., 869
 Van Schilfgaarde, R., 1102
- Vanhnen, H., 755
 Vargas, F., 779
 Vault, S., 23
 Vaxillaire, M., 157
 Vegter, D., 1102
 Veldhuis, J.D., 1317, 1792
 Velho, G., 478, 1503
 Velussi, M., 216
 Verge, C.F., 926
 Verme, D., 736
 Vestergaard, H., 1267
 Vettore, M., 463
 Vialettes, B.H., 67
 Viberti, G., 974, 1729
 Vichi, S., 947
 Vidal, H., 891
 Vigneri, R., 502
 Vionnet, N., 478
 Virkamäki, A., 302
 Vives-Pi, M., 779
 Vohl, M.-C., 1405
 Volchuk, A., 1798
 Volpi, E., 1245
 Vranic, M., 148, 454
- W**
 Wabitsch, M., 1435
 Wada, R., 56
 Wagenknecht, L.E., 742
 Wahlström, E.O., 615
 Wallberg-Henriksson, H., 615
 Wang, L., 1678
 Wanke, I.E., 1217
 Wannamethee, S.G., 576
 Warren-Perry, M.G., 639, 825
 Wasmeier, C., 1187, 1344
 Wasson, J., 157
 Watada, H., 1478, 1826
 Watanabe, R., 1701
 Watkinson, A., 415
 Wayland, H., 385
 Webb, G., 242
 Wegelius, U., 1471
 Wegmann, D., 1299
 Wei, M., 822
 Weigle, D.S., 531
 Weir, G.C., 1161
 Weiss, M., 801
 Weissman, I., 705
 Welle, S., 863
 Welling, C.M., 825
 Wells, A., 1619
 Welsh, N., 1197
 Wera, S., 980
 White, D.W., 1141
 Wi, J.K., 446, 651
 Wibell, L., 1427
 Wicker, L., 1535
 Widemeyer, H.-M., 242
 Willemsen, J.J., 15
 Williams, C.J., 992
 Williams, J.C., Jr., 348
 Williamson, J.R., 284, 642
- Williford, J., 1619
 Winesett, D.E., 434
 Wiseman, M.J., 1729
 Wishner, K.L., 541
 Wolf, B.A., 711, 854
 Wolfel, E.E., 79
 Wong, H.-G., 56
 Wong, N.C.W., 1217
 Woods, S.C., 531
 Wu-Peng, X.S., 1141
- X**
 Xia, Y., 1108
 Xiang, A., 1572
 Xiang, K.-S., 291
 Xu, W., 691
- Y**
 Yada, T., 295
 Yaekura, K., 295
 Yagihashi, S., 56
 Yamada, K., 1396, 1744
 Yamada, N., 507
 Yamada, Y., 1701
 Yamagata, K., 267, 291, 1503
 Yamagishi, S.-I., 56
 Yamamoto, K., 1826
 Yamamura, K.I., 165
 Yamasaki, Y., 1478, 1826
 Yang, X.-D., 705
 Yasuda, K., 1701
 Yazaki, Y., 507, 1238
 Yip, J.W., 1729
 Yki-Järvinen, H., 302, 1364, 1471
 Yoon, J.-W., 1121
 Yoon, T.-W., 1132
 Yoshino, G., 806
 Youn, J.H., 446, 651
 Young, D.A., 1516
 Young, S.C.J., 91
 Youngren, J.F., 1324
 Yu, L., 926
- Z**
 Zaitsev, S.V., 1610
 Zanetti, M., 463
 Zangen, D.H., 1161
 Zeidler, A., 610
 Zhang, P.L., 1455
 Zhang, Q., 1563
 Zhang, Y., 639, 825
 Zhou, X., 1396
 Zhou, Y.-P., 580
 Zhu, M., 941
 Ziegler, A.-G., 795, 967
 Zierath, J.R., 615
 Zimmet, P.Z., 1367
 Zinman, B., 454
 Zitoun, C., 891
 Ziyadeh, F.N., 522
 Zochodne, D.W., 627
 Zolli, M., 216